Customer No.: 31561
Application No.: 10/709,990
Docket No.: 11416-US-PA

REMARKS

Present Status of the Application

The Office Action objected claims 1-4 and 10 because of informalities. The Office Action, under 35 U.S.C. 103, rejected claims 1-5, 8 ,10, and 13 as being unpatentable over JP 06081057 (abstract), and rejected claims 1-3 and 6-14 as being unpatentable over US 4009027 to Naidich et al. (col. 3, line 57 to col., lines 16).

Upon entry of the amendments in this response, claims 1-4, 10 are amended; claims 7 and 12 are canceled without prejudice, waiver, or disclaimer. Hence, claims 1-6, 8-11, and 13-14 are pending in the present application, with claims 1 and 10 being independent claims.

Claim 1 is amended by incorporating limitations recited in the original claim 7, and thus claim 3 is thus canceled. Claim 10 is amended by incorporating limitations recited in the original claim 12, and thus claim 12 is thus canceled. Thus, reconsideration of those claims is respectfully requested.

Response to Objections

The Office Action objected claims 1-4 and 10 because of informalities: The Markush format is improper. In response thereto, applicants have amended claims 1-4, and 10 to conform the Markush format. Accordingly, Applicant respectfully submit that the objection has been overcome and should be withdrawn.

Customer No.: 31561
Application No.: 10/709,990
Docket No.: 11416-US-PA

Response to Rejections under 35 U.S.C. 103

1. JP 06081057

The Office Action, under 35 U.S.C. 103, rejected claims 1-5, 8 ,10, and 13 as being unpatentable over JP 06081057 (abstract). Applicants respectfully transverse the rejection as it applies to claim 1-5, 8 ,10, and 13 for at least the reasons set forth below.

The independent claim 1, as amended, recites as follows.

1. (currently amended) A solder composition, comprising:
chromium (Cr) in an amount of 5~20 wt.%;
stibium (Sb) in an amount of 0.01~50 wt.% ;
a component selected from ~~a~~ the group consisting of tin (Sn), zinc (Zn), bismuth (Bi), indium (In) and a mixture thereof; and
an impurity.
(emphasis added)

Claim 10 also recites the similar features.

The claimed invention provides a solder composition comprising stibium (Sb) in an amount of 0.01~50 wt.%. In the solder composition of the claimed invention, stibium not only regulates the bonding temperature, but also enhances wettability of the solder composition and can enhance bonding strength after bonding (paragraph [0033], lines 12-15).

JP 06081057 (abstract) discloses Cu alloys contains Fe 5-30 wt.%, Co 0.0005-1.0 wt.%, Ti 0.005-3.5 wt.%, Cr 0.5-10 wt.%, Mo 0.001-1.5 wt.%, optionally Zr, Si, Al, Ni, Zn, Sn, Nb, P, La, Ce, Y, V, Ca, Be, Mg, and/or Hf 0.005-8 wt.%, and C and/or B 0.005-2%.

Since JP 06081057 does not disclose the Cu alloys contain stibium, the amended independent claims 1 and 10 patently define over JP 06081057. Consequently, the dependent

claims 2-5, 8, and 13 are patentable over JP 06081057 for at least the same reasons as the independent claims, from which these claims respectively depend, as well as for the additional features these claims recite.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

2. US 4009027 to Naidich et al.

The Office Action, under 35 U.S.C. 103, rejected claims 1-3 and 6-14 as being unpatentable over US 4009027 to Naidich et al. (col. 3, line 57 to col., lines 16). Applicants respectfully transverse the rejection as it applies to claim 1-3 and 6-14 for at least the reasons set forth below.

The independent claim 1, as amended, recites as follows.

1. (currently amended) A solder composition, comprising:
chromium (Cr) in an amount of 5~20 wt.%;
stibium (Sb) in an amount of 0.01~50 wt.% ;
a component selected from ~~a~~ the group consisting of tin (Sn), zinc (Zn), bismuth (Bi), indium (In) and a mixture thereof; and
an impurity.
(emphasis added)

Claim 10 also recites the similar features.

The claimed invention provides a solder composition comprising stibium (Sb) in an amount of 0.01~50 wt.%. In the solder composition of the claimed invention, stibium not

only regulates the bonding temperature, but also enhances wettability of the solder composition and can enhance bonding strength after bonding (paragraph [0033], lines 12-15).

US 4009027 to Naidich et al. (col. 3 lines 57 to col. 4, lines 16) disclose that the alloy may have the following weight percentage composition: at least one metal selected from the group consisting of copper, tin, aluminium, cadmium and zinc -- 10 to 89; at least one metal selected from cobalt and nickel -- 0.001 to 11; at least one metal selected from titanium, chromium, zirconium, manganese, molybdenum and tungsten -- 0.001 to 80; and at least one element selected from vanadium, niobium, tantalum and boron -- 0.001 to 80. In order to impart low oxidizability to the alloy at elevated temperatures, at least one metal selected from gold, gallium, indium and germanium in an amount of 0.001 to 89 weight percent is added. In order to impart an increased flowability to the alloy 0.001 to 10 weight percent of at least one metal selected from thallium, lead, antimony and bismuth is added.

Since US 4009027 to Naidich et al. does not disclose that the alloy contains stibium, the amended independent claims 1 and 10 patently define over US 4009027. Consequently, the dependent claims 2-3, 6, 8-9, 11, and 13-14 are patentable over US 4009027 for at least the same reasons as the independent claims, from which these claims respectively depend, as well as for the additional features these claims recite.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Customer No.: 31561
Application No.: 10/709,990
Docket No.: 11416-US-PA

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-6, 8-11, and 13-14 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Date: March 15, 2005

Respectfully submitted,

Belinda Lee

Registration No.: 46,863

Jianq Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jcipgroup.com.tw
Usa@jcipgroup.com.tw